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ECONOMIC TRENDS

ITEM	UNIT OR BASE PERIOD	'57-'59 AVERAGE	1966		1967		
			YEAR	NOVEMBER	SEPTEMBER	OCTOBER	NOVEMBER
Prices:							
Prices received by farmers	1910-14=100	242	266	259	252	251	250
Crops	1910-14=100	223	235	230	217	224	227
Livestock and products	1910-14=100	258	292	284	283	275	269
Prices paid, interest, taxes and wage rates	1910-14=100	293	334	337	344	345	344
Family living items	1910-14=100	286	315	318	323	324	325
Production items	1910-14=100	262	285	286	289	289	287
Parity ratio		83	80	77	73	73	73
Wholesale prices, all commodities	1957-59=100	—	105.9	105.9	106.2	106.1	106.1
Industrial commodities	1957-59=100	—	104.7	105.5	106.5	106.8	107.0
Farm products	1957-59=100	—	105.6	102.5	98.4	97.1	96.5
Processed foods and feeds	1957-59=100	—	113.0	112.6	112.7	111.7	111.0
Consumer price index, all items	1957-59=100	—	113.1	114.6	117.1	117.5	—
Food	1957-59=100	—	114.2	114.8	115.9	115.7	—
Farm Food Market Basket: ¹							
Retail cost	Dollars	983	1,100	1,100	1,089	1,085	—
Farm value	Dollars	388	442	421	417	410	—
Farm-retail spread	Dollars	595	658	679	672	675	—
Farmers' share of retail cost	Per cent	39	40	38	38	38	—
Farm Income:							
Volume of farm marketings	1957-59=100	—	121	168	139	176	167
Cash receipts from farm marketings	Million dollars	32,247	43,219	4,818	3,951	4,915	4,600
Crops	Million dollars	13,766	18,384	2,659	1,821	2,581	2,600
Livestock and products	Million dollars	18,481	24,835	2,159	2,130	2,334	2,000
Realized gross income ²	Billion dollars	—	49.7	—	49.2	—	—
Farm production expenses ²	Billion dollars	—	33.3	—	34.4	—	—
Realized net income ²	Billion dollars	—	16.4	—	14.8	—	—
Agricultural Trade:							
Agricultural exports	Million dollars	4,105	6,855 ³	—	491	532	—
Agricultural imports	Million dollars	3,977	4,492 ³	—	348	376	—
Land Values:							
Average value per acre	1957-59=100	—	—	150 ⁴	160 ⁴	—	—
Total value of farm real estate	Billion dollars	—	—	171.4 ⁴	182.0 ⁴	—	—
Gross National Product: ²							
Consumption ²	Billion dollars	457.4	743.3	—	791.2	—	—
Investment ²	Billion dollars	294.2	465.9	—	495.3	—	—
Government expenditures ²	Billion dollars	68.0	118.0	—	112.2	—	—
Net exports ²	Billion dollars	92.4	154.3	—	178.2	—	—
	Billion dollars	2.7	5.1	—	5.4	—	—
Income and Spending: ⁵							
Personal income, annual rate	Billion dollars	365.3	584.0	602.1	634.4	635.9	641.7
Total retail sales, monthly rate	Million dollars	17,098	25,306	25,610	26,732	26,122	26,525
Retail sales of food group, monthly rate	Million dollars	4,160	5,927	5,921	6,042	6,040	—
Employment and Wages: ⁵							
Total civilian employment ⁶	Millions	63.9	72.9	73.9	74.6	74.6	75.1
Agricultural ⁶	Millions	5.7	4.0	3.9	3.7	3.7	3.8
Rate of unemployment ⁶	Per cent	5.8	3.8	3.5	4.1	4.3	3.9
Workweek in manufacturing	Hours	39.8	41.3	41.3	40.9	40.7	40.9
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	2.72	2.76	2.85	2.85	2.89
Industrial Production: ⁵	1957-59=100	—	156	159	157	156	159
Manufacturers' Shipments and Inventories: ⁵							
Total shipments, monthly rate	Million dollars	28,745	44,037	44,393	44,723	44,427	—
Total inventories, book value end of month	Million dollars	51,549	77,897	76,896	81,176	81,543	—
Total new orders, monthly rate	Million dollars	28,365	45,182	44,052	45,274	45,490	—

¹ Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1959-61—estimated monthly. ² Annual rates seasonally adjusted third quarter. ³ Preliminary. ⁴ As of March 1. ⁵ Seasonally adjusted. ⁶ Series revised beginning January 1967, giving data for persons 16 years of age and older.

SOURCES: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

THE AGRICULTURAL OUTLOOK

Farm production expenses have been on the rise since 1940. The rise continued in 1967.

Higher prices—particularly for inputs of non-farm origin—and greater use of purchased inputs to grow record crops, combined to increase the cost of farming about 4 per cent in 1967. Total agricultural production last year is estimated to be more than 4 per cent over 1966, reflecting greater efficiency of production.

Expenses for items of nonfarm origin (including labor) were almost 5 per cent above 1966, while outlays for farm-produced items—feed, seed and livestock—were nearly 3 per cent higher.

With increased mechanization and a continuing decline in the number of hired workers, expenses for hired labor are expected to level off in the coming year.

Here's a closer look at U.S. farmers' production expenses:

Farm labor. The same factors which have increased wages in past years—more benefits to labor, tighter supply of competent labor and higher wages in nonfarm industry—were at work again last year. In addition, minimum wage legislation for certain farmworkers became effective last year. And farm wage rates increased to a national average of \$1.11 per hour, up nearly 8 per cent from 1966. Due to a significant increase in crop acreage and yields per acre for many crops, total man-hours of farmwork in 1967 were estimated at 1 per cent above the previous year—a reversal of a long-term trend toward declining man-hours. This was true despite increased use of machinery on farms.

Farm power and machinery. Larger machines that save time and offer sizable reductions in cost per acre contributed to the record \$4.8 billion that farmers spent for machinery and motor vehicles in 1966. Wheel tractors shipped for farm use in 1967 averaged nearly 70 horsepower, compared with an average of

45 horsepower 10 years earlier. Quality improvements and rising manufacturing costs increased prices on these and other machines at the rate of 3 to 4 per cent during 1967. Cost of farm power and machinery represented 22 per cent of all 1967 farm production expenses.

Fertilizer. The latest index of prices paid for all fertilizer indicates prices were 1½ per cent higher than year-earlier levels. Prices of mixed fertilizers and phosphates averaged higher during 1967, while potash and some nitrogenous materials were lower. More fertilizer was used in the 12 months ended June 30, 1967 than the record quantity a year earlier. Use increased 8 per cent over the matching period in 1965/66. Further gains are in prospect for 1968.

Pesticides. Farm use of pesticides in 1967 appears to have reached an all-time high and it is likely to go even higher in the year ahead. Production and sales of such products in 1967—one indication of use—rose from 5 to 12 per cent over 1966. Total pesticide sales were up 37 per cent from 1964 to 1966; herbicide sales, 58 per cent; insecticides, 26 per cent; and fungicides, 20 per cent. Supplies of most pesticides were adequate in 1967 and prices have generally been stable.

Feed. Prices of formula feeds for dairy, beef and sheep production eased during 1967 and consumption was encouraged by feed manufacturers' use of cost-cutting ingredients. The quantity of concentrates available for 1967/68 is estimated at about 248 million tons, some 6 per cent above a year earlier and 2 per cent over the 1962-66 average. With the number of grain-consuming animals up less than 1 per cent in 1967, the supply of feed concentrates per animal was about 4 per cent higher than the previous year.

Seed. Total carryover stocks at mid-1967 were 10 per cent above the level of a year earlier. Stocks of winter cover crop seeds were 1 per

cent above 1966, while those of grass seed were 24 per cent larger. Seed production in 1967 was generally less than 1966 and prices higher than average except for timothy and orchard grass. Not counting Merion bluegrass, available supplies for 1968 will be close to or below those of 1967 and prices about the same.

Feeder and replacement livestock. The number of cattle available for feeding changed little in 1967 from a year earlier. The feeder cattle inventory on January 1, the number of calves born and total number of cattle and calves slaughtered in 1967 differed little from the comparable numbers in 1966. Prices paid by farmers for feeder and replacement livestock in 1967 remained unusually stable. The index of prices of all types in November 1967 was 357, eight points below the 365 index in November 1966. In prospect for early 1968: Improved pasture in much of the range area; large supplies of feed grains and little change in the number of cattle for feeding; higher prices for fed cattle; and continued firm prices on feeder cattle.

Taxes. Further increases in the value of livestock, poultry, farm machinery and motor vehicles in 1967 again increased the total personal property tax bill. Total farm personal property taxes reached \$319 million in 1966, up from \$295 million the previous year. Farm real estate levies in 1966 rose about 8.6 per cent over a year earlier to a total of more than \$1.8 billion. Taxes per acre increased from \$1.61 per acre in 1965 to an estimated \$1.74 per acre in 1966.

Interest. In 1967 interest charges on farm debt reached a record \$2.7 billion. Farm debt, excluding Commodity Credit Corporation loans, increased from \$44.5 billion at the beginning of 1967 to about \$48.6 billion at the end of the year. Non-real estate debt accounted for \$2.4 billion and real estate debt accounted for \$1.7 billion of the increase.

The supply of mortgage loan funds, curtailed in the second half of 1966 and early 1967 by the tight money market, improved later in 1967. The amount of farm loan money available in 1968 is expected to be adequate. The cost of loan funds will remain high and possibly increase slightly.

Insurance. Increased insurance expenditures in recent years have been related to higher premium rates, increased social security tax rates, and increased coverage on larger investments that are subject to loss or damage. Last year's insurance costs for farm and family—including social security taxes—are expected to total about \$2.5 billion. This is about 6 per cent above 1966.

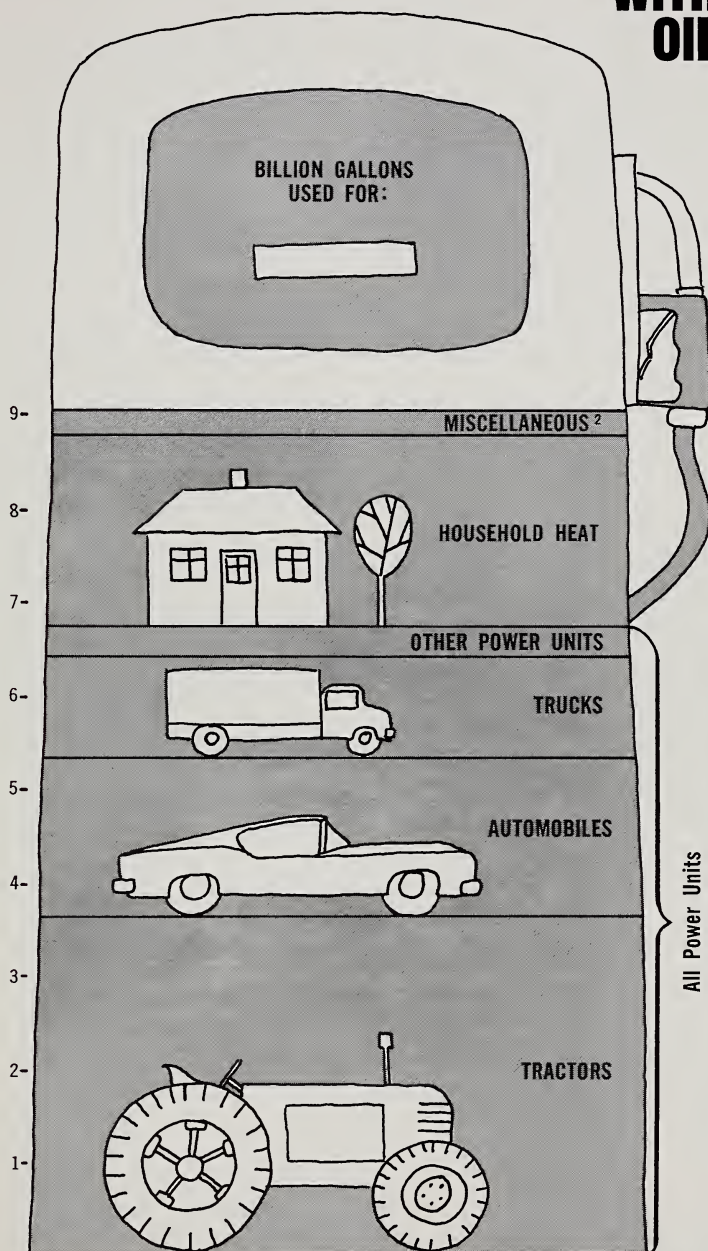
The cost of insurance on automobiles and trucks in 1967—mainly liability, collision and comprehensive coverage—is estimated at \$440 million, the largest expenditure for any one line of property insurance.

Insurance to protect growing crops against damage from hail, drought and other hazards is another important expense, especially to growers of wheat, corn, soybeans and tobacco. Total premiums paid to crop-hail insurance companies and the Federal Crop Insurance Corporation are expected to be about \$160 million for 1967.

Farm real estate. Market values of farm real estate rose 6 per cent from March 1966 to March 1967 to \$182 billion. Values per farm have increased about 10 per cent annually in recent years to the present level of \$63,200 per farm. Rental rates of farm real estate have also increased, but not quite as much as real estate values. Farm operators continue to be the major buying group, representing nearly two-thirds of the total buyers of farms.

Farm service buildings. The value of farm service buildings reached \$16 billion in 1967, representing 8.8 per cent of the value of all farm real estate. Total expenditures for farm service buildings—and expenditures for repairs—have decreased due chiefly to the declining number of farms. Depreciation, however, has increased sharply. As a result, the sum of depreciation and accidental damage on farm service buildings has exceeded capital expenditures since 1962. This difference represents a net reduction in 1966 of \$253 million in the book value of farm structures in the United States.

TOILING WITH OIL



The \$1.8-billion flow of liquid petroleum fuel pumped into the nation's 3.3 million farms averaged out to about 2,750 gallons per farm in 1965¹. Over one-third of the volume was used in tractors.

¹Excludes Hawaii and Alaska, and also does not include motor oil or other lubricants, natural or utility gas.

²Such as drying crops, killing weeds, and heating water, buildings and orchards. (1965 Figures.)

Now that machines have replaced the workhorse and reduced the need for hired hands—gas, oil and other petroleum products have become a big production expense on farms.

Ask a farmer to come up with a synonym for farm power and the answer might well be "petroleum."

Petroleum is one of six items that accounted for nearly half of farmers' total production expenses of \$33.3 billion in 1966.

(The other items were machinery, fertilizer, pesticides, feed, and farm credit.)

What is the general shape of things in the petroleum industry, and the extent of interrelationship between the industry and the farm?

Nearly all the power used by farmers for crop production depends on petroleum, natural gas, and their derivatives.

Petroleum turns the farmer's wheels, heats his home, surfaces his roads, fertilizes his crops, helps him control pests, and feeds his cattle.

Used in internal combustion engines, it has greatly reduced the need for farm labor. And it has nearly eliminated draft animals from the rural scene.

Since the discovery of petroleum in the first commercial well at Titusville, Pa., in 1859, the petroleum industry has grown to the point where it supplies three-fourths of the Nation's fuel energy needs.

Six major oil companies control about a third of the crude oil production, and 32 companies about two-thirds. The industry is highly integrated throughout all phases of production and distribution, both horizontal and vertical.

The farm market accounts for only about 5 per cent of total petroleum sales (and another 2 per cent of petrochemicals).

Yet these energy fuels made up about 8 per cent—or over \$1.5

billion—of current farm operating expenses in 1966.

In addition, well over \$300 million worth of petroleum products were bought by farmers for uses not directly connected with their farming business.

About one-fourth of farmers' total petroleum product purchases are handled by over 2,800 farmer cooperatives. They own a variety of facilities ranging from tank trucks to refineries.

The petroleum industry's interest in agriculture goes far beyond supplying farmers fuel:

—The industry owns a large share of the basic sources of natural gas, a major raw material ingredient of ammonia for fertilizer.

—It also accounts for nearly 40 per cent of U.S. production capacity for synthetic anhydrous ammonia.

—Several petroleum firms have extended their business to other fertilizer mining and manufacturing operations.

—Petroleum hydrocarbons are the base for many agricultural pesticides and for urea, an important nitrogen product used for fertilizer and feed.

The direct farm share of the petroleum market can be expected to decline as farmers convert to more efficient power units or use lower cost fuels, or both.

On a volume and value basis, however, farm use of petroleum products will probably continue to increase. Among factors indicating this trend are:

—A marked increase in the horsepower of individual power units on the farm, both tractors and specialized self-propelled equipment; and

—Greater use of petroleum heating oils for the farmstead, orchards, groves, and stationary processing equipment.

At the same time, increasing quantities of petroleum will be used by other sectors of the economy on which farmers depend for production inputs. (1)

Feeding More But Small Cattle Can Up Returns for Delta Beef Producers

If you have a cotton field that isn't growing cotton, what do you do with it?

Use it to produce feed for beef cattle, one would judge from the response of many a farmer in the Mississippi River Delta area of Louisiana, Mississippi and Arkansas.

Beef cattle have, historically, taken up the slack in the area's agricultural economy when resources were released from cotton and from producing feed for work animals.

Often as not, the industry has been characterized by an extensive cow-calf system, despite the relatively low returns. Problems

with the feed supply, and a lack of experience, according to local observers, have kept in check the development of a fed cattle industry.

But a small number of progressive farmers are beginning to show the way to greater profits. In all, perhaps a dozen area producers have come to grips with the problems of highly mechanized systems for fattening calves and steers with high-energy silage supplemented with urea at ensiling to make up the complete feed.

A recent ERS report analyzes the cost-and-return position of about seven of these operations. A few of the findings:

—Production costs averaged 14.55 cents per pound of gain in the 1965-66 feeding year, with corn silage charged to the feeding operation at production cost and no land charge. Including a charge for land of \$21 an acre would have resulted in a cost of 17.41 cents per pound of gain.

—Producers were not using their lots or silage storage at anything near capacity. If they had, they could have cut costs and raised output noticeably.

At 320 days of full capacity for the lots, for example, costs would have been reduced by about 1¼ cents per pound of gain. The amount of beef produced would have increased by close to 80 per cent.

Costs could have been cut even further by increasing the per acre level of feed production and by a more exact balance of lot capacity to storage capacity.

—It is likely that cheaper gains would result from feeding small animals, rather than larger steers. Lower feed consumption and spreading fixed costs over more units would be primarily responsible.

The study made no attempt to assess the relative grades, demand, or the difference in purchase or selling price between the small and larger animals. (2)



A Dollar Sign Is Not Only Measure Of Crop Losses; Other Factors Apply

The lightning and thunder usher in a driving hail storm. When the sky clears, the farmer sees that 50 acres of wheat are gone.

What has the farmer lost? He can say he lost about \$1,875 or 1,250 bushels of wheat, or enough wheat to make 86,500 one-pound loaves of bread or just plain 50 acres of wheat.

The farmer is likely to use different measures in describing his loss to a neighbor, to the tax collector, or to the manager of a grain elevator.

Like farmers, statisticians and economists can use different measures to make their work meaningful. One of their measures might be the 86,500 loaves of bread.

Here are some of the ways statisticians and economists look at crop losses:

—*Potential production.* In countries where the chief goal is to increase agricultural production, the statistician looks on crop losses as potential crop increases.

Some losses—those caused by weather or other uncontrollable forces—are unavoidable.

Other losses might be avoided by the application of technology. And in many cases statistical data are yardsticks to measure the degree of control possible.

—*Potential food nutrients.* In many food-short countries, 86,500 loaves of bread can be a highly expressive unit of measure, as it measures crop loss in terms of dietary needs.

More specifically, calorie, protein or fat content can be especially useful as a "common denominator" in measuring relative magnitude of crop losses on a global basis.

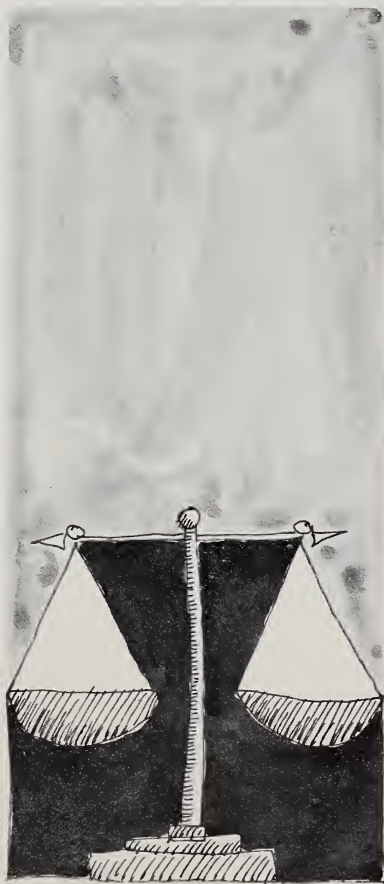
—*Land equivalent.* The land equivalent technique is the most effective means of evaluating losses on ranges and pastures. One

problem, however, in evaluation on this basis is that lands vary in yields.

—*Money.* Effect of crop loss on a farmer's income is often calculated by multiplying current prices by the amount lost. Simple and often used, this method can be misleading if the national loss of the crop is extensive enough to have helped shape the prices.

Nevertheless, this way of counting losses is helpful in the cost accounting of individual farmers. It is also useful in preparing budgets on a wide scale for loss control. For example, the cash value of crops must be considered in financing extensive insect control programs.

No one method of expressing crop losses is necessarily preferable to another. (3)



Big Crop Output of Last Year Upped Farmers' Labor Needs Over '66 Level

The 1967 record crop output brought a temporary standstill to the long-term decline in man-hours required on U.S. farms.

It took an estimated 7.5 billion man-hours of labor last year to tend to crops and livestock on the Nation's farms. This was 1 per cent more than was used in 1966, despite the increase in output per man-hour. During 1950-66, the number of man-hours used decreased by nearly 50 per cent.

In combination with land, fertilizer, machinery and other inputs, an hour of labor was able to produce 3 per cent more last year than in 1966.

Though the hours of labor increased last year, the number of workers (including operators) continued to drop, but not as rapidly as in 1964-66. In 1967, about 5 million persons worked on farms at some point during the year. In 1966 farm employment in the United States totaled 5.2 million persons.

The average hourly farm wage last year was \$1.34 (without room and board). This was 16 cents higher than in 1966. Chief factor contributing to the rise was the first-time coverage of certain hired farmworkers under the minimum wage provisions of the amended Fair Labor Standards Act passed in 1966.

Beginning February 1, 1967, the minimum wage for covered farmworkers was \$1.00 an hour (including perquisites). On February 1, 1968, the minimum will be \$1.15.

Other factors which helped boost labor costs last year included increased social security withholding taxes, higher workmen's compensation insurance rates in some states and the first-time inclusion of farmworkers under this program in other states, and increased nonfarm competition for workers. (4)

Profits Improve, Though Efficiency Doesn't, in Two-Man Dairy Operation

Feeding, milking and otherwise tending a dairy cow costs just as much, per animal, for a herd of 40 as for a herd of 90. But the larger herd will double the dairyman's returns, simply because each additional cow means additional profits.

Recently ERS economists and the Wisconsin Agricultural Experiment Station studied the differences in net returns for one- and two-man dairy operations in Wisconsin. The one-man farm could handle 40 cows; the two-man operation, 90. Assumptions were that both types of farms averaged 13,000 pounds of milk per cow annually and received \$3.56 per hundredweight of milk after hauling.

The one-man farm in the study used 11.4 months of hired and family labor. Net farm income was \$12,750 (including \$4,880 as a 5-per-cent return on invested capital). With a return to family and hired labor of \$250 a month, the operator would get \$5,020.

Farm Changes

Innovating farmers with labor-saving inputs are likely to face the problem of keeping themselves and their traditional work force profitably busy.

Enlarging their farms is one answer to the problem. Many farmers have already done so. And this is among the reasons for the following changes between 1935 and 1966 in the agricultural pattern:

—Number of farms declined from a high of over 6 million to not much more than 3 million.

—The number of farm operators and unpaid family workers fell from 10 million to below 4 million.

—Average employment of hired workers dropped from 2.9 million to less than 1.4 million.

—Some 7.5 million farm workers left farming, a 59 per cent decline in 30 years. (6)

Using the same costs, prices and production, the two-man farm showed a much better return to the operator. It used about the same amount of family and seasonal hired labor, but milked more than twice as many cows as the one-man farm. Net farm income amounted to \$26,680 (including \$7,180 return to capital). The return to the operator and a full-time hired man was \$16,500. If the full-time hired man was paid \$500 a month, the farmer would then receive \$10,500 for labor and management.

Labor and capital invested on the two-man farm was 50 per cent higher than on the smaller unit, but the number of cows and gross income was 125 per cent higher. Because income per cow didn't differ significantly with herd size, larger herds made for more operator income. Net returns to operator's labor and management on the two-man operations were about two times more than on one-man farms. (5)

While the Tax Rate Remained Stable, Farm Real Estate Taxes Hit a Record

State and local tax levies on farm real estate climbed 8.6 per cent in 1966 to a record total of \$1.8 billion. This was the 24th consecutive annual increase and, in terms of percentage, the largest since 1947.

The average tax per acre rose 13 cents to \$1.74 in 1966. Led by Kentucky and Georgia, 44 states showed increases in tax per acre while only four states—Alaska, Montana, New Mexico and Utah—experienced decreases.

Averaged for all states, the effective rate of tax remained steady at \$1.02 per \$100 of full value. The stability of this figure at around \$1.02 for the past six years indicates that the rise in tax levies during this period has been about equal to gains in market value of farmland throughout the United States. (7)

Farm Expansion, Economic Growth Boost Value of Nebraska Real Estate

Nearly three-fourths of all land transactions last year in major farming areas of Nebraska were *not* for complete farms. And even if they were, the farm often became part of another one.

A survey of 231 real estate deals indicates that "health and age" are the most common reasons for selling land. "Farm enlargement and investment" are the primary incentives for buying.

Among other findings:

—Over 80 per cent of the 231 buyers were active farmers operating larger-than-average farms.

—About 20 per cent of the sellers were active farmers, 50 per cent were non-farmer sellers and 30 per cent were estates.

—The most common sizes of tracts changing hands were the 80-acre tract and the quarter section.

—In three-fourths of the transactions, total sale price ranged from \$10,000 to \$40,000.

—The buyer's prime consideration was location of the tract in relation to his own farm. While only 6 per cent of the buyers lived on the tract they bought, 63 per cent lived within 5 miles of it.

—About 25 per cent of the buyers paid all cash for the land they bought; 21 per cent signed purchase contracts; the remainder used some form of mortgage financing.

As a result of these land transfers, active farmers have increased the size of their farms.

Along with this farm expansion the price of Nebraska land has continued to rise. Generally expanding economic activity is one contributing factor. Another is the scarcity of tracts available for purchase by those who want to enlarge their farming operations still further. (8)

THE SNOW HARVEST



When winter sets in up in the northern part of the country, a farmer might think of investing in the ski trade—but that's a pretty big, expensive proposition.

In theory, all a skier needs is enough snow and a mountainside.

In fact, it takes about \$200,000 to provide for the minimum standards and facilities demanded by the public from commercial skiing establishments.

That, at least, is the situation

in parts of Wisconsin, according to a recent ERS study of investment possibilities in the area.

And, as the study noted, the typical large ski enterprise in 1965 represented an investment in excess of a million dollars. The average large resort boasted a snow machine, had seven rope tows and usually had a chair lift as well as T and J bars. It also maintained a complete winter chalet with a restaurant, bar and a snack bar.

The largest operations inevitably rented and sold sports equip-

ment and provided skiing lessons.

To vary the schedule, the largest enterprises might offer other winter sports such as snowmobiling, ice skating or tobogganing. And one provided a swimming pool. But all these activities were of minor importance, at best, when stacked against the importance of snow on the slopes.

Even when the operation amounts to little more than a couple of rope tows and maybe a snack bar and shelter, the cost is appreciable. Nineteen of the 47 ski enterprises studied were

not commercial ventures. These usually were organized as non-profit clubs providing skiing opportunities for local residents. Even these had average investments of about \$45,400.

The investment for the small commercial operations averaged out to \$30,900. A medium-size investment for the area amounted to \$191,500 and there were four large ski resorts with average investments of \$1,015,000.

Biggest cost by far for the ski businesses—at any size—was the investment in land and buildings. Snow machines were the next most costly, but only the large operations had them. The money put into machinery and equipment in general, however, was near the top of the list of investment for all the resorts studied.

No matter what the added attractions, skiing is the main event—and biggest money maker. Sale of ski tickets averaged \$184,500 for the four biggest enterprises, about \$25,000 for the seven medium operations, and \$3,400 for the 17 small setups. The sale and rental of sports equipment and providing ski instruction added appreciably to income directly tied to skiing.

Some other conclusions of the study were:

—The small commercial ski enterprise is generally supported by the local skiers on a daily or weekend basis. Usually, the operation has little more than a shelter house and one or two rope tows, for an investment of less than \$25,000.

—Weekend skiers are the most numerous customers, though local skiers add somewhat to mid-week use of the facilities.

—The most popular resorts were turning customers away on weekends, begging for them early in the week. Lower rates for midweek have helped somewhat to draw the customers during the off days.

—Larger resorts try to attract skiers for a week's stay. (9)

Farmwork Is Chief Activity of Only A Small Portion of Hired Farmworkers

It took about 1 billion man-days of labor to run America's farms in 1966. Roughly one-fourth of this labor was done by hired workers.

Almost 2.8 million different persons did some work on farms for wages or salaries in 1966, 12 per cent fewer than the year before.

Casual workers (less than 25 days of farmwork) numbered 1.1 million and averaged nine days of employment for which they earned \$70. The noncasual group (25 days or more) totaled 1.6 million persons, averaged 138

days of work and earned \$1,188 during the year.

Hired farmworkers who did some nonfarm wage work during the year generally made more money than those who worked only on farms. About 1.1 million persons did both types of work in 1966. They earned an average of \$8.65 a day for 55 days of farm work and \$12.85 a day for 109 days of nonfarm work. As a result, their total wages for the year came to about \$1,880.

The 1.7 million workers who were employed only on farms earned about \$894 for 104 days of farm wage work—less than half the average annual earnings of persons with both types of employment. (10)

HIRED FARMWORKERS IN 1966 WERE MOSTLY MALE, WHITE AND YOUNG			
Selected characteristics	Total	Male	Female
		Per cent	
Sex	—	74	26
Color			
White	73	79	58
Nonwhite	27	21	42
Chief Activity			
Farm wage work	21	26	8
Other farm work ¹	6	7	3
Nonfarm work	15	17	8
Unemployed	2	2	1
Not in labor force	56	48	80
Age			
14 to 24	53	54	50
25 to 44	22	20	25
45 to 64	20	20	21
65 and over	5	6	4
Residence			
Farm	28	29	25
Nonfarm	72	71	75
Region			
Northeast	8	8	7
North Central	19	24	5
South	47	42	60
West	26	26	28
Migratory status			
Migratory	13	12	15
Nonmigratory	87	88	85
Duration of farm wage work			
Less than 25 days	41	37	53
25 to 74	26	24	33
75 to 149	12	13	9
150 and over	21	26	5
Total farm wages earned			
Under \$200	16	13	31
\$200 to 999	46	42	58
\$1000 to 1999	18	20	9
\$2000 and over	20	25	2

¹Includes operating and farm and unpaid family labor.

Middle-Aged Men and Women Differ On How To Spend Retirement Leisure

"When I retire and have time to do what I want, I'll ..." Everybody has heard this once or twice.

ERS researchers heard it more than twice when they took a poll of people near retirement age in Harrison, Kentucky, to sound out after-retirement hopes and plans. They found:

—Seventy-seven per cent of the men planned to hunt, fish, and spend time at other sports.

Only 13 per cent of the women looked forward to active sports activities. The rest favored sedentary hobbies, such as sewing and reading.

—The sole sedentary activity preferred by more men than women was radio listening and television watching—men, 34 per cent; women, 27 per cent.

—Only about 20 per cent of those interviewed planned to start new hobbies or activities after retirement.

—Three-quarters of the group surveyed thought the county should have a special place for old people to meet.

—About 43 per cent thought they would like to attend classes in a school for old people. (11)

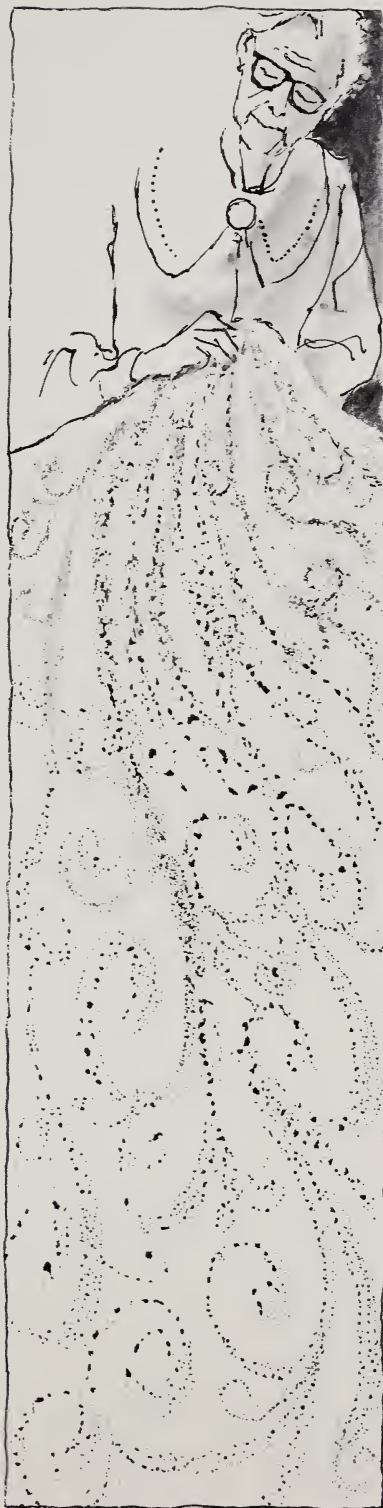
Old Folks Who Live in Iowa Are As Numerous as Those Living in Florida

Every older person who is sunning himself on a park bench in St. Petersburg has a counterpart who may be shoveling snow in Sioux City.

Iowa is now tied with Florida when it comes to the proportion of residents who are 65 and over.

In each of the two states, about 1 out of 8 citizens (12.4 per cent of the state population) is in the older-person age group.

Iowa's older people numbered 343,000 in 1965. Another 565,000 were in the 45-64 age group; and



many of them have by now moved into the 65-and-over category, or will in a few years.

Back in 1880, the Hawkeye State had an abundance of children and youth. Half of its population was under 20 years old. Only about 1 person out of 30 was an "older person."

The subsequent shifts in age distribution reflect the complex interaction of births, deaths, and migration that changed the Nation's population pattern as a whole.

The results of this interaction in Iowa indicate that people who have lived and worked to adulthood in a farming-oriented area have tended to stay there.

Many of their children, however, have sought their fortunes in other states where the young grandchildren are now being enumerated. (12)

Off-Farm Jobs in Slack Season Boost Migrant Farmworkers' Meager Income

There are times when a short work year seems appealing. But migratory farmworkers—who average one of the shortest work years of all groups in the labor force—know how unappealing unpaid leisure can be.

Because of the short agricultural season, migrants employed exclusively at farmwork averaged only 104 paid work days (about five months) in 1965.

Not only was their work year short, but their wages were low. The national average farm wage for this group was about \$10 a day. The result: Migrants whose only job was farmwork earned about \$1,000 in 1965.

Almost half of all migratory farmworkers—about 200,000 persons—held nonfarm jobs at some point during 1965. This group reported an average of 158 work days (7½ months) of paid employment; about one-third of these days represented farmwork. Nonfarm jobs paid work-

ers about \$3 a day more than farmwork. As a result, the migrants who held nonfarm jobs earned about \$1,700 in 1965, of which \$500 was from farmwork.

The majority of migratory workers who had nonfarm employment worked in blue-collar occupations, primarily at the semi-skilled or unskilled level. Skilled craftsmen were relatively rare. One-fourth of the migratory workers held service jobs in restaurants, hotels, laundries and similar firms. Only one-tenth were in white-collar fields. (13)

ERS Yardstick Measures Economic Growth for Rural Areas of the Nation

To measure economic progress in rural areas, ERS economists recently constructed a type of yardstick—an economic indicator system. This yardstick, or its modifications, can be applied to any rural area in the nation. And measurements can be updated annually with the use of readily available data.

The economic indicator system was recently used to measure economic progress in Little River County, Arkansas, as compared with that for neighboring counties and the entire state during 1960-65.

The results showed substantial economic improvement for the county, particularly in 1964 and 1965 when various public and private programs were initiated to promote economic growth.

These various public and private programs have led to faster gains in income, employment and general business activity in Little River County than in neighboring Sevier and McCurtain (Okla.) Counties and in the state as a whole. For example:

—Employment in Little River County increased 124 per cent between 1960 and 1965, compared with a 25-per-cent rise for the entire state.

—Average weekly earnings

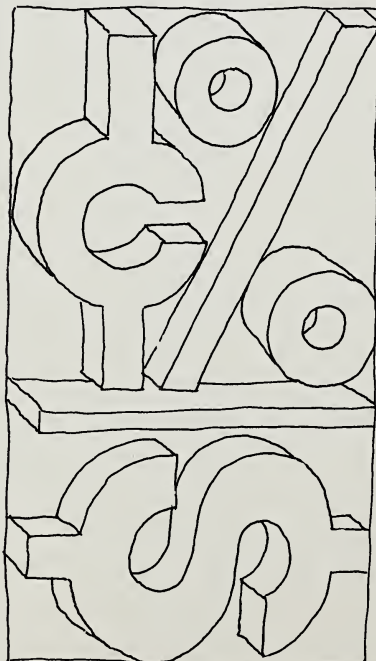
per worker rose from \$58 in 1960 to \$94 in 1965, a 63-per-cent increase. For all of Arkansas, earnings during the same period rose only 22 per cent, from \$64 to \$78.

—Total payrolls in Little River swelled 273 per cent, compared with a 53-per-cent increase for the entire state during the 1960-65 period.

—Receipts from sales taxes and use taxes were up 84 per cent in Little River, only 48 per cent for the state.

—Per capita bank deposits in Little River were 87 per cent greater in 1965 than in 1960, while for all of Arkansas the gain was 53 per cent. The increase in time deposits per person was particularly sharp in Little River, 212 per cent, compared with a state increase of 120 per cent during the 1960-65 period.

—The total rates of changes of all the economic indicators comprised the overall general business activity. This activity in Little River County during 1965 was estimated by the economists to be up more than 66 per cent from the 1960 level. (14)



Skilled People Are Among Imports Needed To Enliven Depressed Areas

Competent labor, water, land, open space, electric power—these are things that industry seeks in a rural area. If the area has enough of them and is close to good markets, industry often moves in.

But what does a depressed rural area need most from an industry? A payroll.

Many depressed areas lack advanced educational institutions; hence, they also lack enough people with education and technical skills to foster growth.

Most industries find they have to import their managers and technicians into depressed areas. The new people, in turn, may train area residents to take over specialized jobs.

Depressed areas will not thrive without this critical group of skilled people. They are the ones who plan the work, keep the books, repair the machines and design the community programs that will enliven the economy.

Also, since the better educated and better trained earn more, they are apt to spend more in the local community and pay more taxes.

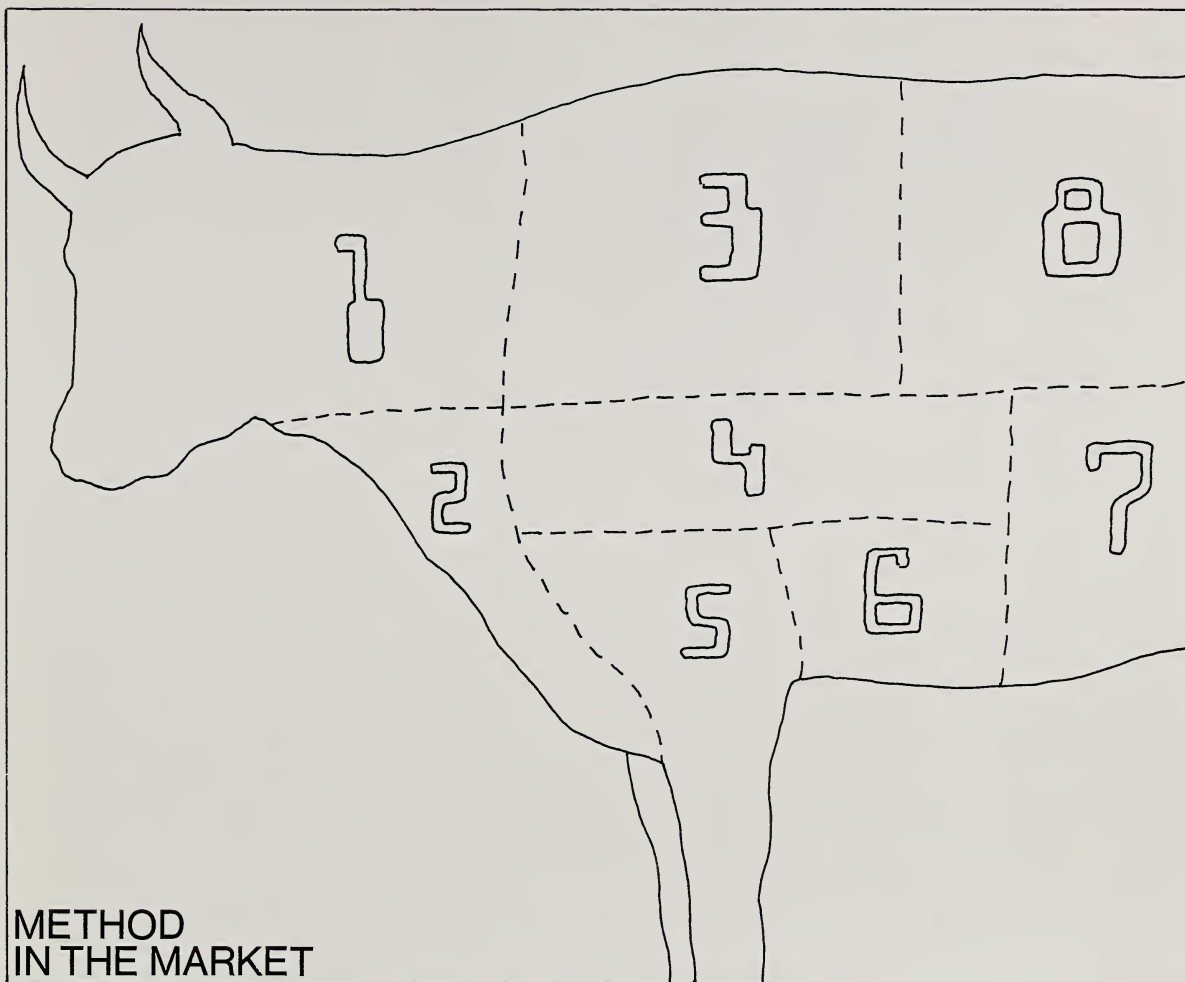
To attract and hold the skilled labor force, new communities and sometimes new towns are necessary in depressed areas.

The skilled laborers, now living in suburbs or other developed areas, enjoy good schools, hospitals and other community facilities. They are not likely to move into areas that offer less.

Diverse jobs, and promotion, training and recreation opportunities are also needed. The one-company rural town will attract few persons from the suburbs.

If an area lacks these attractions, a skilled worker will move and get a fuller life and higher pay elsewhere.

Thus, the area loses the resource it needs most—skill. (15)



METHOD IN THE MARKET

Computers help today's livestock industry follow marketing trends important to its future—and it's a big improvement over the past. But how do the economists do it?

Since the days when drives along the Chisholm Trail were still a regular part of the livestock industry, the marketplace has grown more complex—and more efficient.

Following today's market changes and trends is a job for highly trained professionals.

Computers, working with information supplied by econo-

mists, can analyze past and present marketing patterns and future possibilities at a pretty fast clip. Here's how the preparations work.

USDA economists develop various assumptions of possible changes in national and regional livestock production, consumption, slaughter capacity and transportation rates.

These assumptions are applied, one at a time, to models of the future livestock-meat market. Then, the effects of these possible changes on the flow of livestock and meat in the U.S. can be studied independently.

Specific probabilities recently fed into the computers for the beef sector of the market included:

A reduction in the long-distance transportation rates. Transportation costs always affect the industry's shipping patterns.

Slaughter capacity equal to production for slaughter in all regions. As older slaughter plants are replaced, the new ones are set up in regions where returns to additional capacity will be greatest—that is, where current facilities are not able to meet regional demand for slaughter. Thus, it is reasonable to assume that

eventually a region's slaughter capacity will increase to accommodate all production for slaughter—an alternative also applied to the hog/pork sector.

Increased consumption in the South. This might result from current government programs designed to raise the income and standard of living in the poverty pockets of today's South.

A rise in production for slaughter in the Southeast, the South, the Great Plains and the Southwest, and the Intermountain States. Present trends indicate that beef production will probably increase in several of these areas in the next 10 years. Increases in production for each area were considered separately.

Specific assumptions for the hog/pork sector included:

A shift from slaughter production to feeder pig production in the states surrounding the Corn Belt. This can be expected in the light of present production technology. And in this case, slaughter capacity can be expected to increase proportionately in the Corn Belt and decrease in the fringe areas.

Tractor Traits

When Farmer Jones buys a new piece of farm equipment, chances are it's a new tractor with more horsepower than his old one.

Tractor purchases make up about one-fifth of the U.S. farmer's annual bill for farm machinery. Well over 60 per cent of wheel-type units bought in 1966 had at least 50 horsepower, compared with less than 20 per cent with that horsepower 10 years ago.

Chief reasons farmers give for buying their biggest tractor are: "more power needed," 78 per cent; "to perform job faster," 57 per cent; "farming more land," 44 per cent; and "old tractor worn out," 42 per cent.

Where they buy their tractors depends chiefly on loyalty to a brand, service offered by the dealer, and price. (17)

Increased production for slaughter in the South and Southeast. Full slaughter capacity is not now being used in these areas, and as their economy improves, increases in production might logically be expected.

This type of research can give today's marketing management a firmer base for decisions concerning future operations than was possible before the development of electronics computers. (16)

Lamb Marketings Occur Year-Round; Sales Are Linked to Lambing Patterns

When does the lamb crop move to market? Where do slaughter supplies come from?

ERS economists recently conducted an informal survey of USDA livestock market news reporters and others familiar with the sheep and lamb industry to find the answers to these questions. Here are some of the survey highlights:

—Commercial slaughter of sheep and lambs tends to be concentrated in the areas of heaviest production. For example, over 60 per cent of recent lamb crops were dropped in the 11 Western States and Texas; 47 per cent were slaughtered there. The 12 North Central States, with about 31 per cent of the lamb crops, slaughtered about 40 per cent.

—Two classes of lamb are produced for the slaughter market: spring lamb and fed lamb.

Spring lambs (often called milk-fat) normally are marketed for slaughter when they are weaned—usually at four or five months of age. They make up the bulk of slaughter supplies in the spring and summer.

Fed lambs are those which do not reach the desired slaughter weight and finish by weaning time—and are fattened further in feedlots or on pasture. These lambs make up the bulk of slaughter supplies in the fall and winter. Since a sizable part of the

lamb crop is fed, slaughter lamb marketings are distributed fairly evenly throughout the year.

The marketing of each lamb crop extends roughly from April through March of the following year. Marketing patterns generally follow lambing patterns in the United States.

—California and the Southwest produce a large share of early lambs and thus are the first to ship to market—usually in the early spring. Movement of spring lambs to slaughter and feeder lambs to feedlots then shifts northward and eastward in the late spring and summer. The latest lambs are dropped in the higher elevations of the Mountain States in late spring and are marketed in late summer or fall months.

—The Corn Belt is the center for lamb feeding. Feeder lambs are shipped into the region at all times of the year, but the heaviest inshipments are during the late summer and fall. Likewise, fed lambs are shipped out of the Corn Belt year-round, but most go to slaughter in the late fall or winter months. (18)

Sales and Service

Marketing services—all the processing, packaging and distributing of foods grown on farms—are multiplying at a faster rate than the amount of food being marketed.

Since 1940, the value of marketing services measured in constant dollars, has doubled while the volume of food marketed has grown only 73 per cent. This means an increase of about 16 per cent in the quantity of processing and other services per unit of product sold.

Sales of prepared foods are rising steadily. Frozen dinners, for example, are being bought today at almost twice the rate of four years ago. Sales have soared from \$173 million in 1960 to \$336 million in 1965.

And, in the vegetable section, the proportion of potatoes being processed has jumped from 14 to 44 per cent since 1956. (19)

Modern Market Building Centralizes Produce Handling in Philadelphia Area

In Philadelphia the modernization of the produce marketplace has involved a physical face lifting and some internal changes in the wholesale business. The internal changes may be less striking, but in the long run they may be more important than shining new buildings.

In 1959 Philadelphia replaced its antiquated Dock Street Market with the Food Distribution Center.

Dock Street, which housed 60 per cent of Philadelphia's produce wholesalers in 1959, handled half the market volume. The Food Distribution Center, with half the wholesalers in 1964, handled two-thirds of the business.

But since 1959 there have been some significant internal changes in the Philadelphia produce market—America's fourth largest.

A few of the more important changes are:

—Wholesalers suffered a high mortality rate during the period. There were 207 in 1958, 154 in 1964. One out of every three firms went out of business and only nine new ones entered the field. Part of the decrease was due to a decline in the volume of fresh fruits and vegetables entering the Philadelphia produce market; part due to an increasing proportion of the produce entering Philadelphia moving directly from the fields or shipping points to the chainstores.

—In general it was the smaller wholesalers who went out of business during the period.

—Although the number of chainstore organizations receiving produce directly from shipping point dropped from nine in 1958 to four in 1964, the volume of produce received directly by chainstore organizations increased 39 per cent.

Philadelphia produce whole-



salers as a group were not very optimistic about the future of the produce business. However, in 1964 they were less pessimistic than in 1958, when 60 per cent of them thought that the outlook for the produce business was poor. In 1964 only 41 per cent felt the outlook was poor. (20)

Over Half of Milk Supplies in 1967 Used in Manufactured Dairy Products

If all the estimated 10.5 billion pounds of milk used for frozen dairy products last year were combined into one gigantic cone...

It still wouldn't match the cheese that could be made from the estimated 12.7 billion pounds of milk used in American cheese.

And that would be far smaller than the block of butter that could be made from the estimated 26.4 billion pounds of milk used in butter production in 1967.

But the glass of milk containing the estimated 54.5 billion pounds of milk used in fluid milk products last year would dwarf all three.

Total market supply of milk available in 1967 for processing and manufacture was estimated at 116.1 billion pounds, about the

same as in 1966. The market supply includes milk marketed by farmers, net imports of ingredients, and net change in storage cream.

An estimated 47 per cent of the milk marketed by farmers went into fluid milk products. This was down from 1966 due to a drop in fluid milk product sales and little change in farm marketings of milk and cream.

About 60.5 billion pounds of milk were used in manufactured dairy products (such as butter, cheese, evaporated, condensed, and dry milk, and frozen dairy products). In 1966, 57.9 billion pounds of milk were used.

Butter and American cheese both took more milk last year, but other cheeses, evaporated milk, condensed milk and dry whole milk took less.

Ice cream and other frozen desserts will probably end up using about the same amount of milk (10.5 billion pounds) as in 1966. About 15 per cent of the milk in these products came from imports of butterfat-sugar mixtures in 1967. As the quota on these imports has been reduced, a larger share of 1968 milk marketings by American dairy farmers will go into frozen desserts than in 1967 or 1966. (21)

Gin Motes Are Base for New Cotton Batting That Shapes Up and Holds On

Quilting frames and bodkins, beeswax and cotton batting. They all went off the best-seller list a number of years ago.

But batting's coming back.

Technologists have figured out a way to mold it and plasticize it. The result is cotton "flote" that suits the needs of upholsterers and processors of other items that require shape-holding stuffing.

Renewed interest in cotton batting has whetted cotton ginner's interest in reclaiming gin motes—raw material for batting.

Generally speaking, gin motes mean cotton waste left from the ginning process.

Some cotton ginner's have reclaimed gin motes for years. But only in recent years has the practice become widespread.

Because of their relatively low price, good resilience and workable staple length, gin motes are being substituted for types of cotton mill waste no longer available or no longer competitive in price.

About 38 per cent of U.S. gins collected their gin motes in the 1966/67 marketing year. State proportions ranged from a low of 3 per cent in Louisiana to a high of 88 per cent in California.

Most gin motes are sold in baled form in the Southeast and in loose form in the West. For the entire Cotton Belt, 54 per cent of 1966/67 motes sales were baled and 46 per cent loose.

The U.S. average price received for baled motes was 3.25 cents a pound, with a regional range from 2.79 cents in the Southeast to 4.22 cents in the West. Price variation seems to reflect the extent of cleaning and fiber length and strength.

For loose motes, the U.S. average price was 0.86 cent a pound—with a regional range from 0.43 cent in the Southwest to 1.58 cent in the South Central

region of the nation.

Though price differences were statistically significant, the price for baled motes was not generally high enough in most cases to offset the weight loss incurred in baling.

Sixty-two percent of all gins still discard their motes. Most ginner's dispose of the waste by burning it, though a few return it to the land as a fertilizer and soil conditioner.

Lack of baling and collecting equipment, insufficient demand, and low prices are the chief reasons given for discard.

However, current and future efforts to lessen air pollution will increase the problem and cost of gin waste disposal. As restrictions on burning of cotton waste continue to be tightened, there will be increasing incentive to sell as much waste as possible—if only to cover costs of collecting it and hauling it away.

In the case of usable gin motes, a salvage operation may be profitable as well. (22)

Fractured Alfalfa Process Can Make Parts More Valuable in Feed Mixes

Poultry feed processors may soon find themselves turning over a new leaf—a new all-leaf dehydrated alfalfa meal.

USDA scientists have found ways of separating the high-protein alfalfa leaf fraction from the stem. And ERS researchers, through linear programming, have been able to place economic values on alfalfa meal components in several mixed feed poultry ration formulas.

These findings show that the substitution point where the price for alfalfa meal is still high and where a comparatively large amount of an alfalfa meal nutrient component called *xanthophyll* is required in the mix is the most significant for alfalfa dehydrators.

This pioneering work in eco-

nomie evaluation of feed ingredients may also help indicate potential values of alternative research projects.

For example, the study indicates that future research on increasing the energy content of alfalfa meal will be more profitable than work on increasing the *lysine* (another nutrient) content.

Alfalfa meal has hitherto been limited to 15, 17, or 20 per cent protein grades. The recent developments may make commonplace an alfalfa meal of 25 per cent protein or higher. (23)

Hourly Earnings in Food Marketing Industry Continue To Climb During '67


Wage rates in the food marketing industry continued to climb in 1967 as they did in most industries.

Employees in all food marketing firms earned an average of \$2.53 an hour in September 1967 (latest available figures). This represented a gain of 5 per cent over a year earlier—and exceeds the average annual increase of 4 per cent during 1957–66.

Earnings in different segments of the industry varied considerably above and below the \$2.53 industry average, however. For example, workers in food manufacturing got \$2.63 an hour, about 5 per cent more than in September 1966. But this was 22 cents less than the average for all manufacturing—that is, for automobile, steel, chemical and other manufacturing workers in the economy.

In the wholesale food trade, hourly earnings were about \$2.71 per hour—6 per cent more than a year earlier, but 21 cents an hour less than the hourly average in the rest of the wholesale trade.

Employees of retail food stores earned the least of various food groups—\$2.25 cents an hour. But they fared better than employees in all types of retail stores, who averaged only \$2.03 an hour. (24)



THE P.L. 480 CHRONICLE

A helping hand for foreign lands, P.L. 480 is good for the U.S. too. A bigger market for farm products and a better balance of payments position are part of payoff.

What magic transforms a stalk of wheat in Kansas into a community development project in Brazil, a trade fair in the Netherlands, and a malaria eradication program in India?

No magic is involved. The transformation of U.S. food into better health and higher levels of living abroad is the major purpose of the Agricultural Trade Development and Assistance Act (more commonly known as Public Law 480 or the Food for Peace Act). When first enacted in 1954, P.L. 480 was intended primarily as a temporary tool for moving surplus U.S. farm products to needy countries abroad. But with changing conditions at home and across the seas, P.L.

480 has evolved into a major instrument in the worldwide struggle for freedom from hunger and for economic development.

The food we ship is no longer limited to surplus items. It includes all commodities that the Secretary of Agriculture deems available for export. And under the most recent amendment to P.L. 480, U.S. reserve acreage can even be returned to production as needed for food assistance programs.

Also, P.L. 480 is no longer food aid "without strings." To qualify for concessional sales, developing countries must show their willingness to give high priority to improvements in their own production, storage and distribution of agricultural commodities.

P.L. 480 has changed in other ways, too.

All sales programs, as of January 1, 1967, are carried out under Title I. This new title still includes sales for foreign curren-

cies, sales for foreign currencies convertible to dollars and sales under long-term dollar credits formerly made under Title IV. The new program provides for a progressive transition between now and the end of 1971 from sales for foreign currencies to sales for dollars on credit terms.

All donations to friendly governments, to accredited U.S. voluntary relief agencies and to intergovernmental organizations, are now made under Title II.

Barter agreements are authorized under Title III of P.L. 480 and other legislation.

More than \$15 billion worth of U.S. farm products moved abroad under P.L. 480 in the 12 fiscal years 1955-66. P.L. 480 shipments represented more than one-fourth of our farm exports during this period.

How successful was P.L. 480 in accomplishing its objectives?

Abroad, our farm produce

P.L. 480 — ITS PURPOSES AND PROGRESS

(Fiscal 1955-66)

Item	All programs	Title I	Title II	Title III		Title IV
Purpose	To share abundant U.S. food production with food-deficit countries to prevent hunger and malnutrition and to stimulate economic development	Sale of U.S. farm products to friendly governments with payment in currency of recipient country	Donation of U.S. farm commodities for disaster relief, school feeding and community and other development programs	Donation of surplus farm commodities to accredited U.S. voluntary relief agencies and international organizations for aid to needy persons and use in nonprofit school lunch programs (Included under Title II, effective January 1, 1967)	Barter of U.S. farm commodities for goods and services procured abroad for U.S. government agencies and for foreign-produced materials for stockpiling in the U.S.	Sales of surplus commodities on a long-term dollar credit basis by agreement between the U.S. and recipient governments or private trade entities (Included under Title I, effective January 1, 1967)
Total shipments	\$15,027 million	\$9,811 million	\$762 million	\$1,923 million	\$2,077 million	\$454 million
Share of total U.S. farm exports	26 per cent	17 per cent	1 per cent	3 per cent	4 per cent	1 per cent
Principal commodities	Wheat and flour Cotton Feed grains Vegetable oils Dairy products Rice Tobacco	Wheat Cotton Vegetable oils Feed grains Rice	Wheat and flour Feed grains Dairy products	Flour Corn meal Nonfat dry milk and other dairy products Vegetable oils	Wheat and flour Feed grains Cotton Tobacco Vegetable oils	Wheat Cotton Vegetable oils Feed grains Rice
Principal recipients ¹	India Yugoslavia Pakistan Egypt Brazil	India Pakistan Egypt Yugoslavia Poland	Tunisia Italy UNRWA ² Morocco Pakistan	Children and other needy persons in more than 100 countries	Widely distributed to more than 100 countries	Yugoslavia Chile Taiwan Greece Portugal

¹Excluding Mutual Security Aid Shipments. ²United Nations Relief and Works Agency for Relief of Palestinian refugees.

meant food in times of famine and food to meet nutritional needs for millions of people in many countries. It meant a nutritious lunch—often the only decent meal of the day—for millions of school children throughout the world.

Loans and grants to foreign governments of currencies generated under P.L. 480 sales programs spurred economic development in many lands. It was one such loan that transformed Kansas wheat into a community development project that brought sanitary facilities and pure water to the Northeast area of Brazil.

Another grant provided the funds for a malaria eradication program in India which reduced the number of malaria deaths from 1 million in 1953 to none in 1963.

For the United States, P.L. 480 aid has meant greatly expanded agricultural trade, on a dollar basis. Many countries which rely upon concessional sales eventually become dollar markets for our farm products.

Japan, our No. 1 dollar customer for farm products—with purchases totaling close to \$1 billion in 1966—once was a major recipient of P.L. 480 aid. In fiscal

1956 and 1957, the country received over 30 per cent of its imports of U.S. farm products on concessional terms; dollar purchases amounted to only \$300 million. But in the period 1956–66, our commercial sales to Japan more than tripled.

Italy, too, received substantial quantities of P.L. 480 commodities during 1955–61. Over the longer run, 1955–66, the nation's dollar purchases of U.S. farm products increased eightfold, rising from \$36 million to nearly \$275 million.

The foreign currencies derived from P.L. 480 concessional sales

have paid for market development programs—trade fairs, product demonstrations, and so forth—in many lands. These programs help us keep and advance our footholds in markets overseas.

P.L. 480 has also meant an improvement in the U.S. balance of payments position by cutting our dollar expenditures abroad while adding dollar credits to our coffers.

Whenever possible, U.S. government expenses abroad are paid for with foreign currencies derived from P.L. 480 sales. During 1955–66, dollar savings of nearly \$1.5 billion resulted from the use of foreign currencies instead of dollars.

Our barter program has emphasized overseas procurement of materials, goods and services required by the U.S. government abroad since 1963. Such barter contracts resulted in a total saving of \$479 million during 1963–66.

The first payments of principal and interest from long-term dollar credit sales (under Title IV) were made to the United States in 1963. By the end of fiscal 1966, such payments already totaled nearly \$57 million. (25)

Modern Methods of Agriculture Speed Ancient Iran's Rapid Economic Growth

The land of Omar Khayyam and Persian carpets invests much of its twentieth-century energy in agricultural development.

Iran's economy has grown rapidly in recent years. And almost one-fourth of its development outlay in 1965 and 1966 was for agriculture.

About 2.5 million farms cover around 11 per cent of Iran's total land area. Of the cultivated land, nearly 40 per cent of the total is irrigated.

Wheat continues to be the country's largest single crop. Production in 1966 topped 3 million metric tons.

Iran produces about 40,000 tons of fertilizer annually and imports almost as much. Crops also benefit from organized pest control campaigns carried out by the government and private enterprise.

The poultry industry has expanded in recent years. Most of the growth has been near cities which have transportation and marketing facilities, but rural poultry production has also shown marked improvement. Excluding the hatchery business, Iran now

has an estimated 27 to 30 million chickens and other poultry.

Prompted by rising demand for meat and other livestock products, Iran has established several veterinary institutions to protect its livestock industry. The industry is also benefiting from improved practices introduced through international organizations and individual countries.

The Razi Serum and Vaccine Institute is an internationally-known branch of the FAO-sponsored Near East Animal Health Institute.

By encouraging greater production of import-replacing crops, Tehran hopes to offset the trade and high cost of transporting and storing imported goods.

Imports of agricultural commodities in the fiscal year ending in June 1966 totaled just over \$120 million. This included \$27 million for sugar, nearly as much for fats and oils and \$21 million for cereal products.

Agricultural exports in the same year amounted to only \$100 million. Natural fibers accounted for \$52 million. Fruits and vegetables were the next biggest exchange earners, followed by hides and skins, live animals, tea and spices. (26)

Foreign Spotlight

EAST AFRICAN COMMUNITY: Kenya, Uganda and Tanzania formed a new East African Community among themselves on December 1, 1967. This replaces the former East African Common Market, one of the world's oldest but least known common markets. It had developed gradually over the past 30 years.

Some of the aims of the new East African Community include: Introduction of a common agricultural policy, coordination of economic planning, establishment of an East African Development Bank and continued operation of common services—airways, port, railroad and postal facilities.

MEXICO: In Chihuahua, President Gustavo Diaz Ordaz participated in the distribution of more

than 2.5 million acres of land to almost 10,000 farmers. This was the largest single distribution in the history of Mexican land reform.

PAKISTAN: The Mangla Dam was dedicated on November 23, 1967. It will eventually provide water for 30 million acres of land in the Indus Valley, including 3 million acres of land recently reclaimed from the desert. The \$2 billion complex, located on the Jhelum River about 50 miles east of Rawalpindi, has been financed by the World Bank and the Pakistan Aid Consortium.

In the last decade cotton and rice production in West Pakistan has almost doubled; the wheat crop has not been as impressive. However, with more irrigation and the use of improved seed, farmers hope to harvest six million tons of wheat in the spring of 1968, compared with four million in 1967. (27)



The More That Food Tastes Change, More They Stay the Same--Basically

"Where did the food money go?", a question asked by many housewives, is regularly asked by USDA researchers as well.

The Department's most recent survey indicates that housewives' choices among the major food groups have not changed much in a decade.

But within those groupings a revolution of sorts is taking place.

The typical housewife in 1965 used \$27.82 worth of groceries a week. This was \$3.39 more than

her counterpart in 1955 used.

The 14-per-cent increase in spending over the 10-year period was matched by a similar increase in food prices and more than matched by increased consumer income.

There were few differences in the share of the food money that both housewives allotted to each major food group, however.

For example, 38 cents of the housewife's food dollar went for meat, poultry, fish and eggs in 1965. Her counterpart in 1955 allocated 37 cents for these foods.

There was no change in the percentage of the food dollar spent for fruits and vegetables,

beverages, fats and oils and sugars and sweets. But the share spent for dairy products dropped from 16 per cent to 13 per cent.

However, many changes occurred within these broad food groups in response to changes in prices, preferences and income.

Chicken was a big gainer, with consumption increasing 24 per cent between 1955-65, apparently because prices were dropping. The cost of chicken dropped 11 per cent over the 10 years.

Beef consumption, however, rose 31 per cent during the period despite climbing prices. In this case the gain could be attributed to higher incomes and changes in consumer preferences.

Egg consumption was a different story, down 4 per cent from 1955 despite sharp price drops.

Some of the changes in food consumption reflected a shift to food requiring less home preparation.

Use of fresh fruit declined while use of frozen concentrated and chilled juice increased.

Similar shifts were noted from fresh to frozen and canned vegetables, from fresh to processed potatoes and from flour mixes to purchased bakery products.

Consumption of fresh whole milk and cream, evaporated milk, butter and shortening was down while that of fresh skim milk, nonfat dry milk, margarine and oil rose.

However, differences in prices, making one item a bargain compared to another, may be partly responsible for these changes.

From 1955 to 1965 consumption increased for soft drinks, punches and ades, potato chips, crackers, cookies, doughnuts, ice cream, candy, lunch meats and peanut butter.

Consumption increased for soups and mixtures and prepared breakfast cereals, particularly cold cereals. These gains may be due to an increase in number of varieties on the market as well as to shifts in preferences. (28)

COSTS OF PRODUCING UPLAND COTTON IN THE UNITED STATES, 1964. 1965 SUPPLEMENT. I. R. Starbird and B. L. French, Farm Production Economics Division. AER—99, 1965 supplement.

The total cost of producing the U.S. crop of upland cotton in 1965 was 27.3 cents per pound of lint, compared with 28.4 cents per pound in 1964. This decline was largely due to higher yields and lower labor input.

PRINCIPAL PLANT NUTRIENTS USED ON CROPS AND PASTURE IN ILLINOIS. 1964 Estimates and Selected Comparisons with 1954 and 1959 Estimates. William A. Elder, Roy N. Van Arsdall, Farm Production Economics Division in cooperation with the Illinois Agricultural Experiment Station. Ill. Agri. Expt. Sta. AERR 86.

Detailed estimates of acres fertilized and tons of fertilizer materials and plant nutrients used on crops for the state and its agricultural subregions are given in this report.

EFFECTS OF RECLAIMED GIN-LOSS COTTON ON LINT QUALITY AND SPINNING PERFORMANCE. Shelby H. Holder, Jr., Marketing Economics Division, and Oliver L. McCaskill, Edward H. Shanklin, Agricultural Research Service. MRR-808.

This report is a result of a 1965 study to obtain data for a more comprehensive evaluation of a machine developed in 1964 to perform the job of reclaiming and cleaning fibrous material ejected from lint cleaners.

DEVELOPMENTS IN MARKETING SPREADS FOR AGRICULTURAL PRODUCTS IN 1966. ERS-14(1967).

This report was prepared for the Subcommittees of the Committees on Appropriations of the House of Representatives and of the United States Senate. It discusses the spreads between prices paid by consumers and those received by farmers.



RECENT PUBLICATIONS

The publications listed here are issued by the Economic Research Service and cooperatively by the state universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from The Farm Index, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained only by writing to the issuing agencies of the respective states.

INTERLOCAL GOVERNMENTAL CO-OPERATION: A STUDY OF FIVE STATES. John E. Stoner, Bureau of Governmental Research, Indiana University in cooperation with the Economic Research Service. AER-118.

This study attempts to explore the nature of cooperative relationships among local government units. As demands for governmental services increase in rural areas, alternative ways of providing the services and the funds to pay for them need to be studied. Cooperation among local units of government in rural areas has been advanced as a desirable alternative.

This study was designed to explore local cooperation in the rural, nonmetropolitan portions of five states—Alabama, Indiana, Nebraska, Pennsylvania and Wisconsin.

ASPIRATIONS AND EXPECTATIONS OF THE RURAL POOR—A GUIDE TO RESEARCH. Walter L. Slocum, Washington State University in cooperation with Economic Research Service, AER-122.

This report discusses research approaches in different problem areas of rural poverty and economic development, and develops an outline of the problem of rural poverty, a survey of previous research, evaluation of applicable research methods, and specific research proposals.

AGGREGATE FARM PRODUCTION AND INCOME EFFECTS OF CHANGES IN COTTON ALLOTMENTS AND PRICES IN SOUTH CAROLINA. Hohn W. Hubbard, Thomas A. Burch, South Carolina Agricultural Experiment Station in cooperation with Farm Production Economics Division. S. C. Agr. Expt. Sta. Bull. 533.

The purposes of this project are to provide guides to farmers choosing among alternative production opportunities and to persons engaged in developing and administering public agricultural programs.

THE HIRED FARM WORKING FORCE OF 1966—A STATISTICAL REPORT. Robert C. McElroy, Economic Development Division. AER-120.

Size and composition of the 1966 hired farm working force are analyzed in detail, as well as cash earnings compared with nonfarm wage work during the year. (See page 10, this issue.)

EVALUATING FLOOD PREVENTION IN UPSTREAM WATERSHEDS WITH AN AREAL POINT SAMPLE—INTERIM REPORT, WASHITA RIVER BASIN, OKLAHOMA. G. Sloggett and N. R. Cook, Natural Resource Economics Division. ERS-353.

This interim report discusses use of an areal point sampling technique in estimating the major economic effects of flood prevention in small, upstream watersheds.

DIGEST OF FEDERAL NATURAL RESOURCE LEGISLATION, 1950-66. Bruce G. Campbell and P. Timothy Lawlor, Jr. ERS-355.

This digest summarizes natural resource legislation applicable to agricultural, forestry and related programs. Although emphasis has been placed on recent years so that current trends may be discerned, some earlier legislation is also included to provide the researcher with basic applicable legislation. The legislation is arranged by subject matter rather than chronologically in this publication.

GROWTH IN DEMAND FOR FEED GRAINS IN THE EEC. D. W. Regier, Foreign Development and Trade Division. ERS-For. 158.

The European Economic Community is one of the leading outlets for commercial exports of U.S. farm products. In recent years, the Community has purchased annually over a billion dollars worth of farm products from the United States, and feed grains have been a large and growing part of this trade.

FARM COSTS AND RETURNS commercial farms by type, size and location. Farm Production Economics Division. AIB-230.

Estimates of costs and returns are made for 1966 and reported for other recent years on 44 important types of commercial farms in 25 major farming areas in the United States. Also included are analyses of changes that have occurred in production, prices, income and costs.

WHITE AMERICANS IN RURAL POVERTY. Alan R. Bird, John L. McCoy, Economic Development Division. AER-124.

The special problems of these whites reflect their relative anonymity, lack of organization, and lack of a common identity. They are for the most part a scattered population and their poverty is complex. This paper makes spe-

All About Nuts

Ever seen a purple-pigmented cashew or ever hope to see one?

If so, you probably have your own opinions about the relative merits of Carpathian, Persian and Manregian walnuts.

But what about rooting Macadamia cuttings? Or investing in the market for India's arecanuts and betelnuts? Or documenting the early history of chestnut orchards in Pennsylvania?

All these subjects—and many more of a highly practical nature to the commercial nut grower—are among the 587 titles and over 400 authors listed in a new *Bibliography of Tree Nut Production and Marketing Research, 1960-65*. Misc. Pub.—1064.

Other bibliographies available to Farm Index readers are:

RESEARCH PUBLICATIONS ON DAIRY MARKETING ECONOMICS—AN ANNOTATED BIBLIOGRAPHY. Unnumb. Pub.

SUPPLEMENT 2 TO MARKETING ECONOMICS RESEARCH PUBLICATIONS—A REFERENCE LIST. ERS-205, July 1967.

ECONOMICS OF AGRICULTURE—REPORTS AND PUBLICATIONS OF USDA'S ECONOMIC RESEARCH SERVICE, 1961-65. ERS-350.

ECONOMICS OF AGRICULTURE OF FOREIGN COUNTRIES AND U.S. FOREIGN AGRICULTURAL TRADE. ERS-For. 167.

cific suggestions regarding their special needs.

COST OF PRODUCING BEEF GAINS WITH A HIGH-ENERGY CORN SILAGE FEEDING SYSTEM—MISSISSIPPI RIVER DELTA AREA. Arthur M. Heagler, Bill Bolton, Farm Production Economics Division, Peter G. Hogg, Mississippi Agricultural Experiment Station, in cooperation with Louisiana Agricultural Experiment Station. D.A.E. Res. Rpt. 365.

This publication summarizes the experience of seven farmers who have recently adopted a highly mechanized system of fattening steers and calves using high-energy silage with urea as a substitute for protein supplement.

TURKEY: SUPPLY AND DEMAND PROJECTIONS FOR FARM PRODUCTS TO 1975 WITH IMPLICATIONS FOR U.S. EXPORTS. Lyle E. Moe, Foreign Regional Analysis Division. ERS-For. 204.

This report involves the development of projections regarding the production, consumption, imports, and exports of selected Turkish agricultural products for 1970 and 1975.

TYPES OF FOOD SERVICE OFFERED AND NUMBER OF OUTLETS IN THE FOOD SERVICE INDUSTRY—A PRELIMINARY REPORT. Michael G. Van Dress, William H. Freund, Marketing Economics Division. ERS-359.

The characteristics of establishments that comprise the food service industry are undoubtedly associated with demand for different types of goods and services used by this industry. The information in this report will be valuable to food producers and processors, equipment and supply manufacturers, and distributors of products and services in more effectively meeting the needs of the food service industry.

TWELVE YEARS OF ACHIEVEMENT UNDER PUBLIC LAW 480. Eleanor N. DeBlois, Foreign Development and Trade Division. ERS-For. 202.

This publication presents a statistical summary of shipments under programs authorized by P.L. 480 and Mutual Security (AID) programs for the 12 fiscal years 1955-66. (See page 17, this issue.)

CROP COSTS AND RETURNS. Billy B. Rice, Rodney R. Paul, North Dakota State University in cooperation with the Cooperative Extension Service and the Economic Research Service. N.D. State University Circulars FM-3-67 through FM-9-67.

Each circular contains a worksheet for planning and analyzing farm cropping operations in one of seven North Dakota areas.

Addresses of state experiment stations:

In response to requests from readers wishing to obtain recent publications and source material published through state experiment stations, we are publishing a

list of the experiment stations and their addresses. This list will be printed again in July.

STATE	CITY	ZIP CODE	STATE	CITY	ZIP CODE
ALABAMA	Auburn	36830	MISSOURI	Columbia	65202
ALASKA	Palmer	99645	MONTANA	Bozeman	59715
ARIZONA	Tucson	85721	NEBRASKA	Lincoln	68503
ARKANSAS	Fayetteville	72701	NEVADA	Reno	89507
CALIFORNIA	Berkeley	94720	NEW HAMPSHIRE	Durham	03824
	(317 University Hall		NEW JERSEY	New Brunswick	08903
	2200 University Ave.)		NEW MEXICO	University Park	88070
	Davis	95616	NEW YORK	Ithaca	14850
	Los Angeles	90024		(Cornell Station)	
	Riverside	92502		Geneva	14456
	(Citrus Research Center)			(State Station)	
COLORADO	Fort Collins	80521	NORTH CAROLINA	Raleigh	27607
CONNECTICUT	New Haven	06504		(Box 5847)	
	(P. O. Box 1106)		NORTH DAKOTA	Fargo	58103
	Storrs	06268		(State University Station)	
DELAWARE	Newark	19711	OHIO	Columbus	43210
FLORIDA	Gainesville	32601		(Ohio State University)	
GEORGIA	Athens	30601		Wooster	44691
	Experiment	30212	OKLAHOMA	Stillwater	74075
	Tifton	31794	OREGON	Corvallis	97331
HAWAII	Honolulu	96822	PENNSYLVANIA	University Park	16801
IDAHO	Moscow	83843		(106 Armsby Building)	
ILLINOIS	Urbana	61803	PUERTO RICO	Rio Piedras	00927
INDIANA	Lafayette	47907	RHODE ISLAND	Kingston	02881
IOWA	Ames	50010	SOUTH CAROLINA	Clemson	29631
KANSAS	Manhattan	66504	SOUTH DAKOTA	Brookings	57007
KENTUCKY	Lexington	40506	TENNESSEE	Knoxville	37916
LOUISIANA	Baton Rouge	70803	TEXAS	College Station	77843
	(Drawer E		UTAH	Logan	84321
	University Station)		VERMONT	Burlington	05401
MAINE	Orono	04473	VIRGINIA	Blacksburg	24061
MARYLAND	College Park	20742	WASHINGTON	Pullman	99163
MASSACHUSETTS	Amherst	01002	WEST VIRGINIA	Morgantown	26506
MICHIGAN	East Lansing	48823	WISCONSIN	Madison	53706
MINNESOTA	St. Paul	55101	WYOMING	Laramie	82070
	(St. Paul Campus)			(University Station	
MISSISSIPPI	State College	39762		Box 3354)	

Numbers in parentheses at end of stories refer to sources listed below:

1. G. C. Allen, T. R. Eichers, "Petroleum," The Structure of Six Farm Input Industries (M); 2. A. M. Heagler, B. Bolton, P. G. Hogg, Costs of Beef Gains with High-Energy Corn Silage—Mississippi River Delta Area, La. Agri. Expt. Sta. D.A.E. Research Rpt. No. 365 (P*); 3. G. Barton, D. Durost, Problems in Expressing Crop Losses (M); 4. Farm Cost Situation, FCS-39 (P); 5. N. D. Kimball (SM); 6. Farm Production Economics Div., The Structure of Six Farm Input Industries (M); 7. Farm Real Estate Taxes, RET-7 (P); 8. B. Johnson, L. Leistritz, J. Greer, Farm Real Estate Market in Nebraska, Nebr. Agri. Expt. Sta. SB 495 (P*); 9. R. A. Christiansen and others, The Economics of the Wisconsin Ski Enterprise (M); 10. R. C. McElroy, The Hired Farm Working Force of 1966, AER-120 (P); 11. E. G. Youmans, Leisure Behavior Expectations for Old Age (M); 12. J. Doerflinger, W. W. Bauder, Work and the Older Persons in Rural Iowa (M); 13. A. Raption, Domestic Migratory Farmworkers: Personal and Economic Characteristics, AER-121 (P); 14. J. Ben-Rubin, An Economic Indicator System for Measuring Progress in Rural Renewal Areas, ERS Unnumb. Pub. (P); 15. A. R. Bird (SM); 16. R. J. Crom, Simulated Interregional Models of the Livestock-Meat

Economy, AER-117 (P); 17. P. E. Strickler, "Farm Machinery and Equipment," The Structure of Six Farm Input Industries (M); 18. J. T. Larson, "Regional Lamb Production and Marketing," Livestock and Meat Situa., LMS-157 (P); 19. Marketing and Transportation Situa., MTS-167 (P); 20. A. J. Burnes, The Changing Structure of the Philadelphia Wholesale Fruit and Vegetable Market (M); 21. Dairy Situation, DS-318 (P); 22. S. H. Holder, Jr., Supply and Price Data on Cotton Gin Motes, MRR-809 (P); 23. R. V. Enochian and others, The Competitive Position of Dehydrated Alfalfa Meal in Mixed Feed (M); 24. Marketing and Transportation Situation, MTS-167 (P); 25. E. N. DuBois, Twelve Years of Achievement Under Public Law 480, ERS-For. 202 (P); 26. Foreign Regional Analysis Division (SM); 27. Foreign Regional Analysis Division; (28). National Food Situation, NFS-122 (P); 29. The Africa and West Asia Agricultural Situation, Midyear Review, ERS-For. 199 (P).

Speech (S); published report (P); unpublished manuscript (M); special material (SM); *State publications may be obtained only by writing to the experiment station or university cited.

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N-P-K

The recipe for boosting agricultural production in less-developed countries may vary from nation to nation—but a prime ingredient in this process is mineral fertilizer.

In Africa and West Asia, use of mineral fertilizers has been at low levels until recently. Now countries in these areas are moving ahead with the manufacture and use of these products to increase agricultural production.

Phosphate mining in the Spanish Sahara, under an agreement between Spain and a U.S. fertilizer company, is underway. Senegal, Togo, the North African countries and Jordan are also producing phosphate, one of the three basic components of commercial plant food.

The area is also a potential producer of nitrogen, a byproduct of petroleum and natural gas production. West Asia, North Africa and Nigeria, already producing petroleum and natural gas, would seem to be the most likely sources of nitrogenous fertilizers in years ahead.

Egypt uses power from the old Aswan Dam in the manufacture of nitrogen. Increased production is planned as the new High Aswan Dam becomes operational in 1968.

The first granulated fertilizer plant in Mozambique, with an annual capacity of 120,000 tons, started its operations in August, 1967. This plant manufactures and packages fertilizer in pellet form. It's expected that the plant will eventually supply not only Mozambique, but Swaziland, Malawi and other nearby African nations as well. (29)

THE FARM INDEX

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The contents of this magazine are based largely on research of the Economic Research Service and on material developed in cooperation with state agricultural experiment stations. All articles may be reprinted without permission. For information about the contents, write the editor, the Farm Index, Office of Management Services, U.S. Department of Agriculture, Washington, D.C. 20250. Use of funds for printing this publication approved by the Director of the Bureau of the Budget, May 24, 1967. Subscription orders should be sent to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price 20 cents (single copy). Subscription price: \$2.00 per year; 75 cents addition for foreign mailing.

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